



December 28, 2005

Mr. J. Robert Brown
Engineering Services Division
Bureau of Air Quality
2600 Bull Street
Columbia, South Carolina 29201

Re: Bowater Coated and Specialty Papers Division
PSD Permit Application for Kraft Fiberline Optimization
Additional Information Request for NSR/PSD Review
Permit No. 2440-0005

Dear Mr. Brown:

Bowater Coated and Specialty Papers Division (Bowater) received your request for additional information via electronic mail on December 21, 2005.

DHEC request No. 1

As part of the PSD/NSR review we need the amount of NO_x reduction associated with use of the new 4th level of air as an additional tool for setting up staged air and good combustion control for minimizing NO_x emissions.

Bowater response No. 1

In general, staged combustion techniques (such as overfire air) have the potential to reduce NO_x emissions 10% to 30% below uncontrolled levels. Modern kraft recovery furnaces like the No. 3 recovery furnace are designed with staged combustion to properly oxidize the black liquor solids, and typically have three levels of air. Therefore, the baseline NO_x emissions are already reduced 10% to 30% below uncontrolled levels. The addition of a fourth level of air staging is expected to reduce NO_x emissions further, but not necessarily an additional 30%, since the No. 3 recovery furnace already has staged combustion using three levels of air.

The permitted capacity of the No. 3 recovery furnace will increase approximately 15 percent. The fourth level of air staging is expected to reduce NO_x emissions approximately the same amount, resulting in the same maximum concentration of NO_x in the flue gases (80 ppm @ 8% O₂).

DHEC request No. 2

Please include vendor information for 4 levels of air and NO_x emissions.

Bowater response No. 2

The vendor information is in Attachment 1.

DHEC request No. 3

Also, since oxidation/reduction is being used at MeadWestvaco to control NO_x emissions at the Lime Kiln (SOG gases), the use of this technology for LAER needs to be addressed (A cost analysis is not required since this is for LAER).

Bowater response No. 3

Bowater does not burn stripper off gases (which contain ammonia that generates NO_x emissions) in the No. 2 lime kiln. An evaluation of oxidation-reduction scrubbing to reduce NO_x emissions from the No. 2 lime kiln was included in Section 5.3.2.2.5 (pages 58-59) of the permit application.

If you have additional questions regarding this submittal please contact Jacquelyn Taylor of Bowater at (864) 981-8759, or me at (864) 527-4734.

Sincerely,

Steven R. Moore
URS Corporation

cc: Jacquelyn Taylor – Bowater

Attachment 1

**Vendor Information
Fourth Level Air and NO_x Emissions**



The Babcock & Wilcox Company

a McDermott company

212 S. Tryon St. – Suite 400 • Charlotte, NC 28281 USA • ph. (704) 334-4742 • fax. (704) 334-1438 • www.babcock.com

November 8, 2005

Bowater, Inc.
PO Box 7
Catawba, SC 29704-0007

VIA E-MAIL

Attention: Mr. Craig Shaver, Staff Project Engineer

Reference: B&W Proposal №: P-006306-C
B&W Contract №: PR-205, № 3 Recovery Boiler

Subject: Offer for Supply of a Quaternary Air System with Option for Automated Port Rodders

Gentlemen:

This proposal for the supply of a 4th level (quaternary) air system to Bowater, Inc. (Purchaser), by The Babcock & Wilcox Company (B&W/Company) for the №. 3 recovery boiler located at the Catawba facility. The primary function of this quaternary air system will be to limit NOx emissions from the furnace when operating at a virgin dry black liquor solids (VDBLS) firing rate of 4.036 million lbs/day.

Equipment Description:

The equipment for the proposed quaternary air system will be installed near boiler elevation 599 ft. The new quaternary air system will consist of a new air duct header feeding, four (4) new air ports on the front wall and three (3) new air ports on the rear wall being fed by a new quaternary air fan. The quaternary air flow will be adjusted by manually controlled flow control dampers located in the new duct. Seven (7) individual air port dampers will allow independent velocity control to each of the seven (7) new quaternary air ports.

BASE SCOPE OF SUPPLY:

- Seven (7) new bent tube air port opening panels – four (4) tubes per panel
- Seven (7) new air port boxes with manual dampers
- Two (2) manual air flow bias control dampers
- One (1) low pressure drop air flow measuring device
- One (1) low pressure air flow transmitter
- Two (2) quaternary air duct expansion joints, seven (7) air port box duct expansion joints
- New quaternary air fan with nested inlet vortex assembly, motor and coupling, fan fully assembled & mounted on a base frame. Preliminary specifications: 600HP, 1800 RPM, TEFC, 3/60/2300V, 1.15 SF, G5010Z Frame, coupling - Falk Model: 1120T10, 2.0 SF
- Fan inlet silencer with inlet screen, 85 dBA @ 3 ft., Pos 4
- One (1) fan inlet vortex actuator
- Design and supply of a platform for access to new rear wall quaternary air ports
- Installation arrangement drawings & operating instructions for equipment provided by B&W
- Loop diagram for suggested control of quaternary air system
- 220 man-hours of on-site Service for inventory and inspection of received materials, outage coverage during installation and combustion tuning
- Engineering/Graphics

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Please note that B&W anticipates there will be no adverse affects or increase in the average concentration of TRS (Total Reduced Sulphur) or average concentration of SO₂ in the flue gas at the economizer outlet over a 3 hour performance test period.

Performance Guarantees:

Subject to the conditions in the preceding Performance pages, the COMPANY makes the following performance guarantees:

1. Flue Gas Contaminants

Based on the incineration of the above defined black liquor, the recovery unit will have the capability, when operated at a capacity of 4.036 million lbs/day of VDBLS throughput, to obtain the flue gas conditions and values shown below.

1.1. NO_x

The average concentration of NO_x in the flue gas at the economizer outlet will not exceed 80 ppm for the Base Scope of Supply on a dry volume basis corrected to 8% O₂ over a 3 hour performance test period based on a maximum N₂ content of 0.08% dry weight basis in the virgin black liquor.

Terms and Conditions:

Thank you for the opportunity to present this proposal. We are looking forward to working with Bowater on this project, and if you have any questions please give us a call.

Sincerely,

Gary G. Hellard

Gary G. Hellard
District Engineer

/dlh